

### Abstract of the Disclosure

5 A bipolar plate and a fuel cell using the same are provided. The bipolar plate includes a flow field that has a length between three and eight times greater than the square of the area of the bipolar plate. The fuel cell includes a first bipolar plate in which a fuel flow field having a length that is between three and eight times greater than the square of the area of the first bipolar plate is formed, and a second bipolar plate in which an air flow field having a length that is between three and eight times greater than the square of the area of the second bipolar plate is formed. The fuel cell has a lower, uniform internal pressure and can produce a greater power.